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**ASBESTOS INSPECTION/REINSPECTION  
DECISION TREE**

by

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## ASBESTOS INSPECTION/REINSPECTION DECISION TREE

The Navy's Asbestos Management Program Ashore consists of three key elements: survey and assessment, operations and maintenance (O&M), and design and abatement. While the O&M program provides the framework for an activity to management all asbestos actions, it is often difficult to grasp the scope of the program without a survey and assessment. This document supplements information in the NFESC document SP-2027-ENV, *Asbestos Control Program, Operations and Maintenance Plan*, to aid in determining when an inspection is required by law and when it would be helpful in the management of the O&M program.

NAVFAC agrees with EPA's position that removal of asbestos is often not the best course of action to reduce asbestos exposure. This does not mean we can "do nothing". As a minimum, activities need to establish a pro-active, in-place management program for all Navy buildings with identified and suspect ACM. As part of this program, a survey is extremely helpful, and can be developed, building by building, as needed.

The objective of a survey and material assessment, or asbestos inspection, is to locate, identify, and assess the condition of all suspect asbestos containing material (ACM), however the purpose may be wide ranging. Some reasons for conducting an asbestos building inspection include:

- renovation, demolition, repair or maintenance is scheduled;
- building is part of a school;
- building is part of a base realignment and closure (BRAC) property transfer; and,
- to locate and abate actual or potential hazards

### TYPES OF INSPECTIONS

**NESHAP.** The National Emission Standard for Hazardous Air Pollutants, 40 CFR 61, requires a thorough inspection to identify all regulated asbestos containing materials (RACM) prior to disturbance by renovation or demolition activities. This inspection includes destructive testing to locate inaccessible materials that may contain asbestos. If suspect materials are not sampled and tested they are presume to contain asbestos and treated as ACM. Once identified, all RACM must be removed prior to demolition or renovation that would disturb the material or preclude access to the material for subsequent removal.

**AHERA.** The Asbestos Hazard Emergency Response Act, 40 CFR 763, requires an accredited inspector visually inspect all areas of each school building to identify locations of all friable and nonfriable suspected asbestos containing building material (ACBM), determine friability by touching, and either sample the suspected ACBM or assume that the suspected materials contain asbestos. The inspector must then develop an inventory of areas where samples are taken or material is assumed to contain asbestos. Finally, the accredited inspector is required to assess the physical condition of friable known or assumed ACBM.

**BRAC.** Under DoD Base Realignment and Closure guidance prior to property transfer an inspection must be done to determine if there are any hazards associated with asbestos in the building. Under the guidance hazards must be abated prior to property transfer. Therefore, the

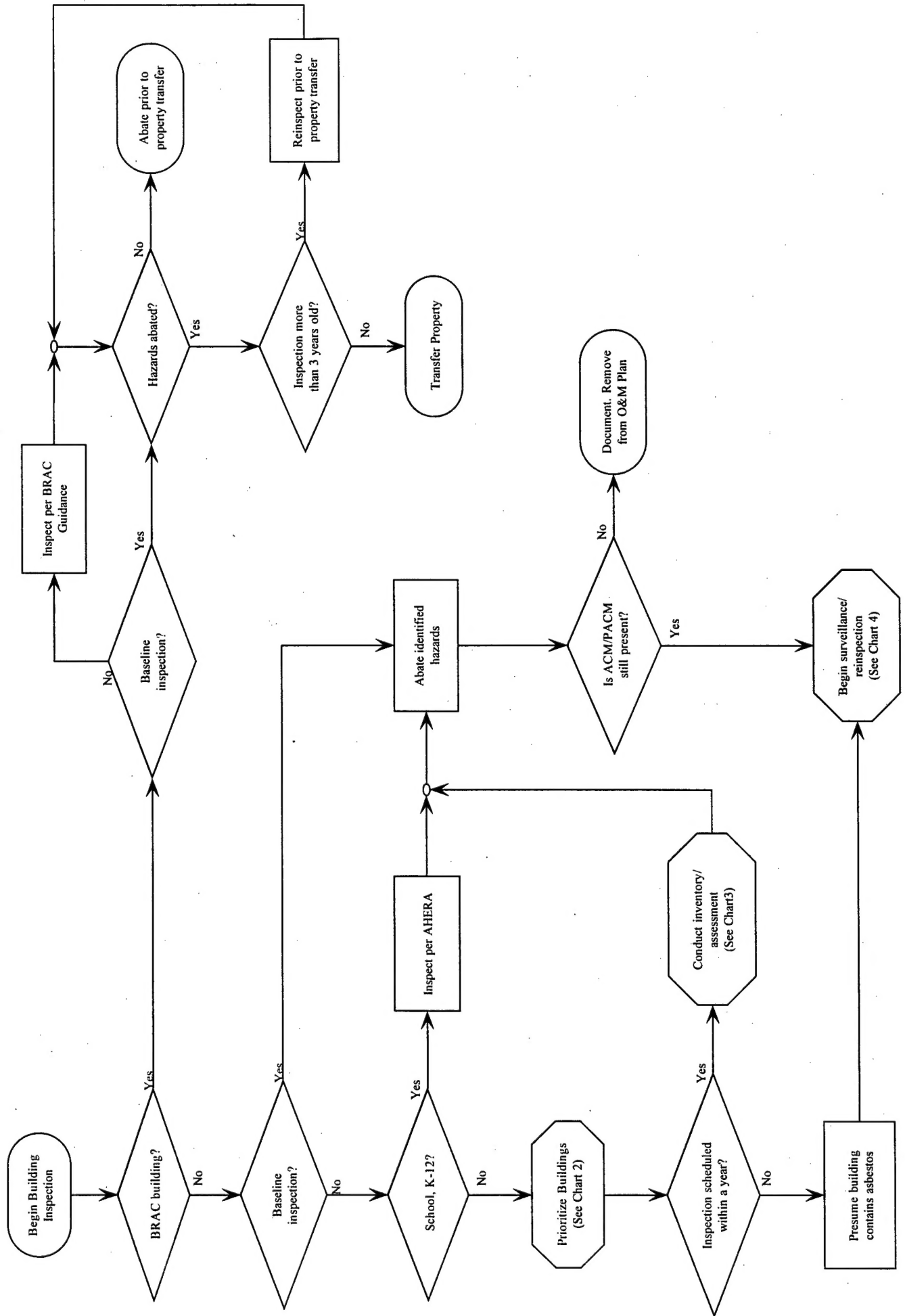
buildings must be inspected for damaged and significantly damaged materials. This inspection includes only those materials that are accessible and does not include destructive testing as required by NESHAP.

**Spot Sampling.** This type of inspection occurs prior to repair and maintenance. Under the O&M plan, all suspect materials are sampled for or treated as asbestos prior to beginning any scheduled repair or maintenance operation. If samples are not taken, assume the suspect material contains asbestos. Ensure that repair and maintenance personnel are properly trained and use the correct work practices when disturbing ACM or PACM.

**Hazard Assessment.** To identify hazards to building occupants, and custodial and maintenance personnel from friable, accessible and damaged ACM or PACM. The older the building the greater the probability of there being friable, accessible, damaged ACM. In these older buildings, pre-1980, it is recommended that a baseline building inspection is completed.

A baseline inspection locates and assesses the condition of all suspect asbestos containing material (ACM), both friable and non-friable. Often, due to financial constraints, activities are unable to complete a baseline inspection for all the buildings. In these cases, prioritize the buildings based on the building age, if it is occupied, how long it is occupied per week, and the building use. In addition, factors such as previous repair and maintenance information, and safety and facility evaluations can be used to aid in the prioritization process. As a minimum, the inspection should include identification samples of damaged and significantly damaged homogeneous areas. If materials are not sampled, presume all suspect materials contain asbestos until laboratory analysis proves otherwise.

**CHART 1: DETERMINING BASELINE INSPECTION REQUIREMENTS**



## CHART 1: DETERMINING BASELINE INSPECTION REQUIREMENTS

This flowchart provides information on the development of a building inspection/inventory. For some buildings the Navy is required, by law or DoD policy, to complete a baseline inspection. For other buildings, baseline inspections are often helpful in determining abatement priorities, planning repair and maintenance operations, etc. and they can be developed, as needed, building by building or area by area.

**Baseline Inspection:** A baseline inspection includes a survey and material assessment of all ACM and PACM. The inspection, conducted by an EPA accredited inspector, includes identifying all suspect material, recording the location quantity, characteristics, and assessing material condition. As stated above, baseline inspections are helpful in implementing an asbestos O&M plan, and are required for some specific types of Navy buildings.

Prioritize buildings that do not have a baseline inspection and schedule for inventory. Conduct the inspections as renovation, demolition, repair and maintenance projects are scheduled. As a minimum, assume all buildings, which have not been inspected, contain asbestos and place on a yearly periodic surveillance schedule.

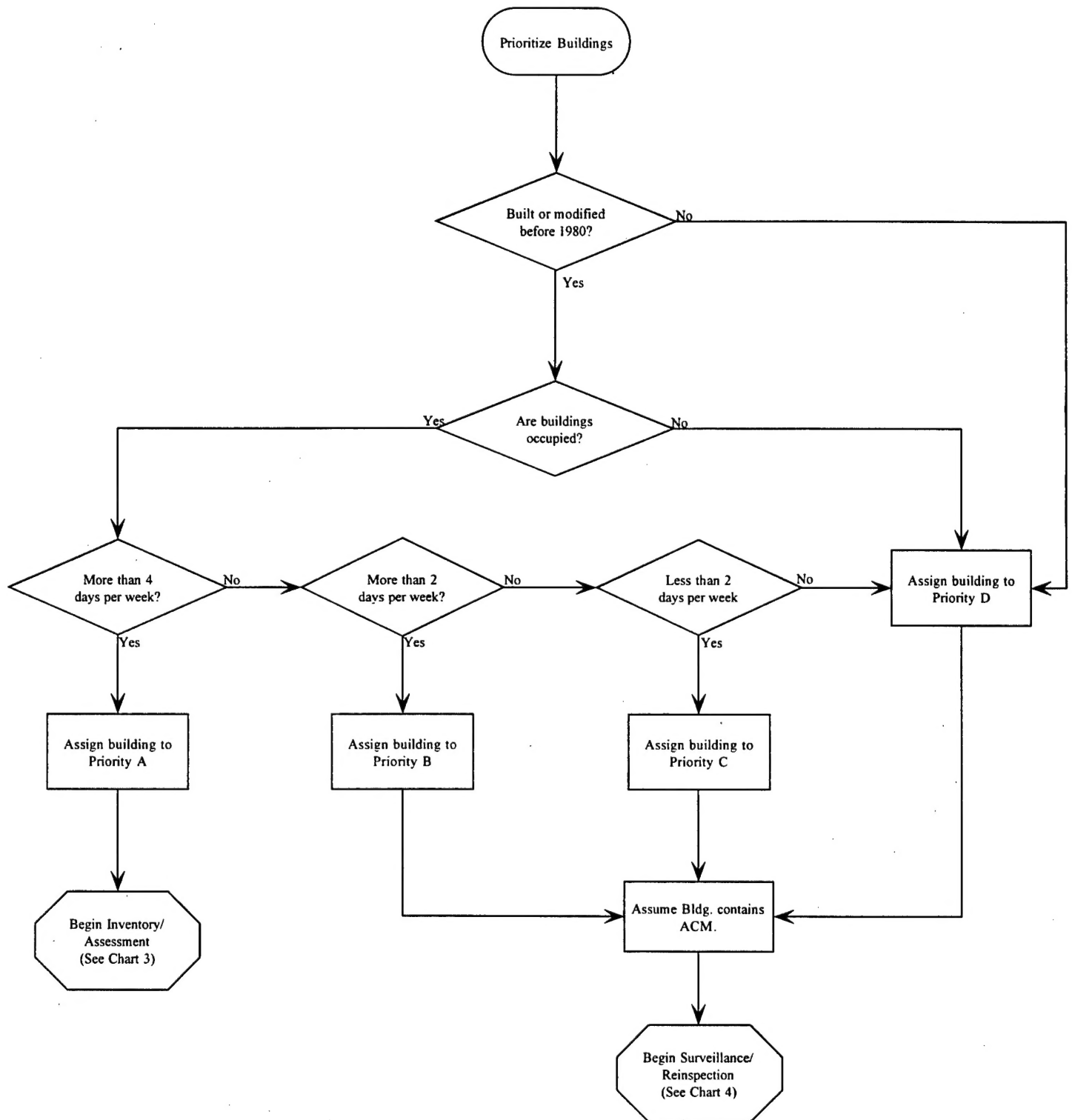
**BRAC Properties:** In October 1994, DoD issued asbestos, lead paint and radon policies for base realignment and closure (BRAC) properties. Under these policies, ACM is to be managed in a manner protective of human health and the environment, and to comply with all applicable federal, state, and local laws and regulations governing ACM hazards. Therefore, unless it is determined that the ACM in the property poses a threat to human health at the time of transfer, all property containing ACM will be conveyed, leased, or otherwise disposed of as appropriate. Prior to property disposal, results of a site-specific update of the asbestos inspection, performed to revalidate the condition of the ACM, must be provided to the property transferee.

ACM, which poses a threat to human health at the time of property transfer, shall be remedied prior to property disposal. Baseline inspections, three or more years old, must be revalidated through a building reinspection since damage and deterioration may have occurred during this time frame. The reinspection helps ensure that at the time of transfer no hazards exist within the building.

**School Buildings:** Under the Asbestos Hazard Emergency Response Act (AHERA), the EPA requires each elementary and secondary school (kindergarten through 12) to perform an inspection of ACBM and to prepare an asbestos management plan. As part of the inspection, provide recommendations for abating hazards. The AHERA regulations further require a reinspection of the ACBM at least once every 3 years.

**Presence of ACM/PACM:** Buildings in which no ACM/PACM is identified, or in which all ACM/PACM is removed can be removed from the asbestos operations and maintenance (O&M) plan. Buildings containing ACM/PACM in good condition should be placed on a periodic surveillance schedule. The periodic surveillance helps to ensure that materials that become damaged or deteriorated are repaired or removed in a timely manner.

**CHART 2: SETTING BUILDING INSPECTION PRIORITIES**



## CHART 2: SETTING ASSESSMENT PRIORITIES

This flowchart provides a systematic approach to prioritize buildings for inspection. The prioritization is based on the building age and occupancy. In all cases, you must presume suspect building materials are ACM, and treat them as such, until sampling and laboratory analysis proves otherwise.

**Building History File:** Before beginning the actual inspection, the team leader should check all available information on the building. Check the history file, as-built drawings, maintenance and repair records, and any other documents that may indicate whether or not ACM is in the building.

**Building Built or Modified Before 1980:** In June 1978, EPA banned all sprayed-on friable ACM (including acoustic ceiling). OSHA requires that all vinyl and asphalt flooring materials in buildings constructed no later than 1980 are assumed to contain asbestos. This conservative date is used as the first criteria for the building prioritization scheme.

**Building Occupancy:** The second criteria used for building prioritization is occupancy level. Buildings occupied four (4) or more days per week are given the highest priority, with the building priority decreasing as the occupancy level decreases.

Priority A: Built/modified before 12/31/80 and occupied more than four days per week. Choose the oldest priority A building to assess first. Also include buildings in which children are present (day care centers) or have open access to (auditoriums, commissaries, etc.).

Priority B: Built/modified before 12/31/80 and occupied less than four days but more than two days per week. With priority B buildings, if the asbestos program manager (APM) chooses to presume, has the option of securing/restricting access to the area and relocating the occupants as needed.

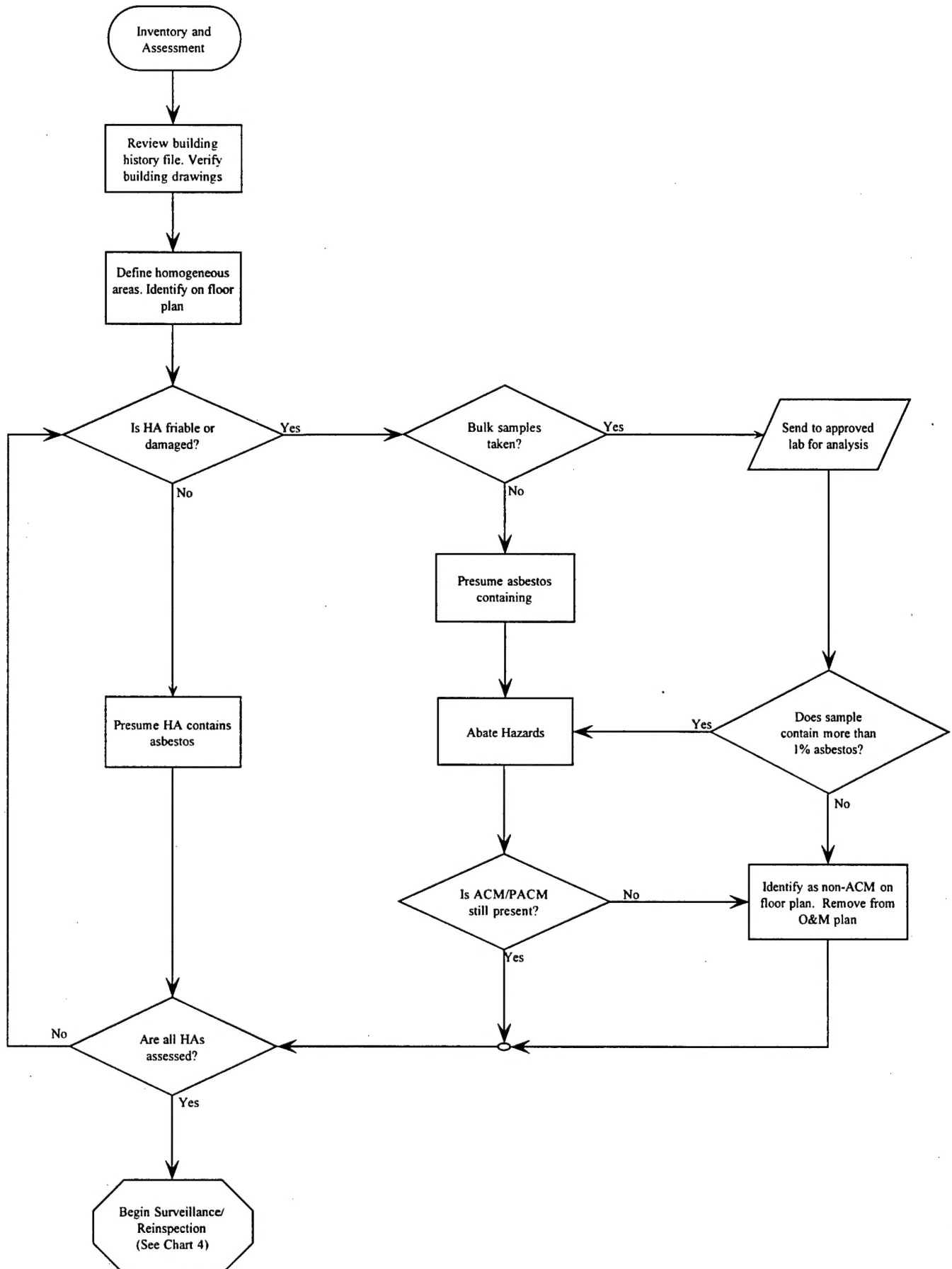
Priority C: Built/modified before 12/31/80 and occupied less than two days per week. Due to the limited occupancy, the APM can choose to relocate occupants and secure the building.

Priority D: Built/modified after 12/31/80 or built/modified before 12/31/80 but not currently occupied. These buildings have the lowest priority for conducting an inspection because: (1) most friable asbestos applications were banned or discontinued prior to 1980, and (2) access to unoccupied buildings can be controlled and restricted to trained and knowledgeable personnel.

Additional factors may be needed to further prioritize buildings. Review the building history file, repair and maintenance information and building drawings to develop additional prioritization factors. Conduct and fund asbestos inspections in buildings scheduled for renovation or demolition as part of the overall building project.



**CHART 3: CONDUCTING AN INVENTORY AND ASSESSMENT**



### CHART 3: INVENTORY AND ASSESSMENT

This flow chart outlines the steps necessary to complete a building inventory and assessment. The inventory/assessment process includes identifying all suspect material, recording the location, quantity, characteristics, and assessing the condition of the material. An EPA/AHERA accredited inspector conducts the inventory/assessment.

**Review Building Information.** Before the actual inspection begins check all available information on the building. Check the history files, as-built drawings, maintenance/repair records, any documents that indicate the history of the building and indicate whether or not ACM is in the building.

**Homogeneous Areas.** Conduct a building walk-through to verify the floor plan drawings and identify homogeneous areas. Homogeneous areas are defined as areas of the same color and texture. Any discrepancies should be noted on the floor plan.

Take bulk samples of homogeneous areas that contain friable, accessible and damaged material. If bulk samples are not taken, presume the material contains asbestos, isolate the area, and schedule for immediate hazard abatement.

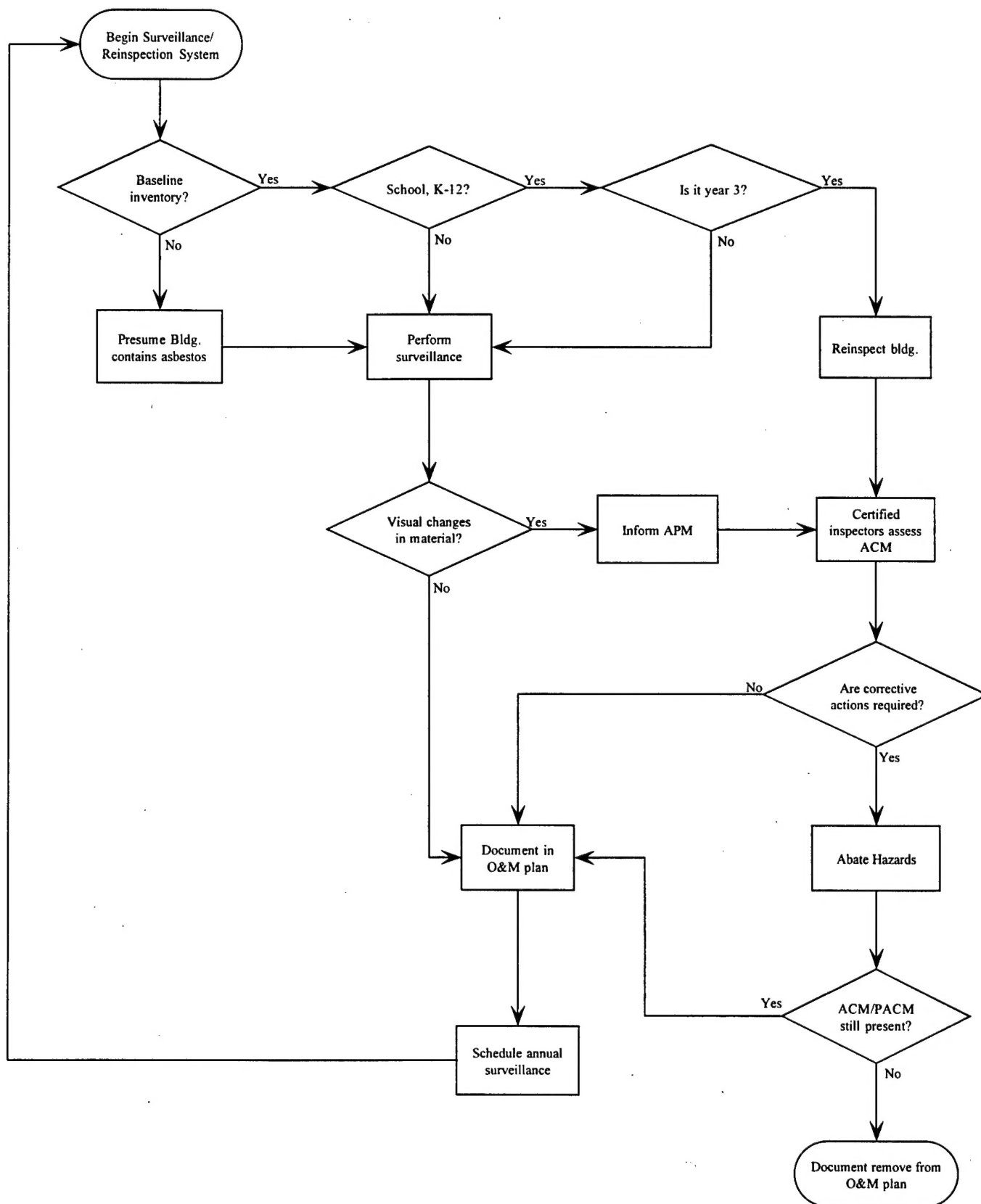
If the homogeneous area is not friable, accessible, or damaged, presume it contains asbestos and treat it as such until laboratory analysis proves otherwise. Post caution notices to warn workers and occupants of the potential hazard. Before the material is disturbed, perform sampling to determine if asbestos is present.

**Bulk Samples.** Bulk sample analysis is the only way to determine if a homogeneous area does not contain asbestos. Use laboratories accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyze bulk samples.

Have an accredited inspector collect bulk samples from each homogeneous area in a statistically random manner. Only samples from friable, accessible, and damaged homogeneous areas must be collected at the time of the baseline inventory. Remaining areas, not sampled, are assumed to contain asbestos until laboratory analysis proves otherwise. Sample these materials prior to renovation, demolition, or repair and maintenance operations.

Bulk samples which have an asbestos content greater than 1% are defined as ACM. These materials, if friable, accessible and damaged, must be abated to eliminate a hazard to maintenance workers and building occupants. If the sample does not contain asbestos, identify the homogeneous area as non-asbestos on the floor plan.

**CHART 4: PERIODIC SURVEILLANCE AND REINSPECTION SYSTEM**



#### CHART 4: PERIODIC SURVEILLANCE AND REINSPECTION SYSTEM

Periodic surveillance is one of the key objectives of an O&M plan and should occur whether or not a baseline inspection has been completed. Reinspections, required for school buildings, can also be conducted on specific buildings identified by the asbestos program manager (APM). An EPA accredited building inspector performs the reinspection.

**Baseline Inventory:** A baseline inventory includes a survey and material assessment of all ACM and PACM. The inspection, conducted by an EPA accredited inspector, includes identifying all suspect material, recording the location quantity, characteristics, and assessing material condition.

If a baseline inventory is not completed, presume that the building contains asbestos and do a visual inspection to determine if there are any potential hazards from friable, damaged material. Take samples or treat as asbestos and abate the materials.

**Periodic Surveillance:** Combined with reinspections, work control/permits, and ongoing reports from maintenance workers of changes in material condition, periodic surveillance ensures that damaged or deteriorated materials are detected. Conduct periodic surveillance on at least an annual basis in all buildings known or assumed to contain asbestos. Trained in-house personnel can conduct the surveillance.

Each surveillance includes a visual inspection of accessible materials for:

- deterioration or delamination from underlying surfaces;
- water damage;
- physical damage, including the presence of debris; and
- disturbance of ACM by employees.

Whenever damaged materials are found, notify the activity APM immediately. A certified inspector then assesses the material condition to determine the degree of hazard, takes a sample when necessary, and recommends required corrective actions. Implement the corrective actions, including clean-up procedures and abatement actions, for all materials considered hazards.

**Reinspections:** Under AHERA, EPA requires each elementary and secondary school to perform a reinspection of ACBM at least once every 3 years. The reinspection period provides an excellent opportunity for schools, as well as others, to update their programs for managing asbestos.